

THAT WHICH IS CLAIMED IS:

1. An antenna assembly to be worn by a user and comprising:

an antenna comprising

a dipole feed,

a first dipole element connected to and extending outwardly from said dipole feed in a first direction,

a transmission line extending from said dipole feed in a second direction opposite the first direction, and

a flexible electrically conductive sleeve surrounding said transmission line and connected to and extending outwardly from said dipole feed to serve as a second dipole element and as a balun; and

at least one fastener to removably fasten the antenna to a garment of the user.

2. An antenna assembly according to Claim 1 wherein said dipole feed comprises a broadband matching network.

3. An antenna assembly according to Claim 1 further comprising a noise filter coupled to said transmission line adjacent an end of said flexible electrically conductive sleeve opposite said dipole feed.

4. An antenna assembly according to Claim 3 wherein said noise filter comprises at least one ferrite

body coupled to said transmission line and a dielectric housing surrounding said at least one ferrite body.

5. An antenna assembly according to Claim 1 wherein said flexible electrically conductive sleeve is also shape-retaining when formed into a shape having at least one bend therein.

6. An antenna assembly according to Claim 1 wherein said flexible electrically conductive sleeve comprises a pair of spirally wound, interlocking, electrically conductive elements.

7. An antenna assembly according to Claim 1 wherein said at least one fastener comprises a pair of fasteners adjacent opposing ends of said flexible electrically conductive sleeve.

8. An antenna assembly according to Claim 1 wherein said at least one fastener comprises:

an Alice clip to connect to the garment of the user;

an Alice clip mounting bracket connected to said Alice clip; and

a quick release knob carried by said Alice clip mounting bracket.

9. An antenna assembly according to Claim 1 wherein said first dipole element comprises a flexible electrical conductor.

10. An antenna assembly according to Claim 1 further comprising a connector coupled to an end of said transmission line opposite said dipole feed.

11. An antenna assembly according to Claim 10 further comprising a length of coaxial coupled to said connector.

12. An antenna assembly according to Claim 1 wherein said transmission line comprises a coaxial transmission line.

13. An antenna comprising:
a dipole feed comprising a broadband matching network;
a first dipole element connected to and extending outwardly from said dipole feed in a first direction;
a transmission line extending from said dipole feed in a second direction opposite the first direction;
a flexible electrically conductive sleeve surrounding said transmission line and connected to and extending outwardly from said dipole feed to serve as a second dipole element and as a balun; and
a noise filter coupled to said transmission line adjacent an end of said flexible electrically conductive sleeve opposite said dipole feed.

14. An antenna according to Claim 13 wherein said noise filter comprises at least one ferrite body coupled to said transmission line and a dielectric housing surrounding said at least one ferrite body.

15. An antenna according to Claim 13 wherein said flexible electrically conductive sleeve is also shape-retaining when formed into a shape having at least one bend therein.

16. An antenna according to Claim 13 wherein said flexible electrically conductive sleeve comprises a pair of spirally wound, interlocking, electrically conductive elements.

17. An antenna according to Claim 13 wherein said first dipole element comprises a flexible electrical conductor.

18. An antenna according to Claim 13 further comprising a connector coupled to an end of said transmission line opposite said dipole feed.

19. An antenna according to Claim 13 wherein said transmission line comprises a coaxial transmission line.

20. A communications system comprising:
a radio to be carried by a user;
an antenna to be worn by the user and connected to said radio, said antenna comprising
a dipole feed,
a first dipole element connected to and extending outwardly from said dipole feed in a first direction,

a transmission line extending from said dipole feed in a second direction opposite the first direction, and

a flexible electrically conductive sleeve surrounding said transmission line and connected to and extending outwardly from said dipole feed matching network to serve as a second dipole element and as a balun; and at least one fastener to removably fasten said antenna to a garment of the user.

21. A communications system according to Claim 20 wherein said dipole feed comprises a broadband matching network.

22. A communications system according to Claim 20 further comprising a noise filter coupled to said transmission line adjacent an end of said flexible electrically conductive sleeve opposite said dipole feed.

23. A communications system according to Claim 22 wherein said noise filter comprises at least one ferrite body coupled to said transmission line and a dielectric housing surrounding said at least one ferrite body.

24. A communications system according to Claim 20 wherein said flexible electrically conductive sleeve is also shape-retaining when formed into a shape having at least one bend therein.

25. A communications system according to Claim 20 wherein said flexible electrically conductive sleeve comprises a pair of spirally wound, interlocking, electrically conductive elements.

26. A communications system according to Claim 20 wherein said at least one fastener comprises a pair of fasteners adjacent opposing ends of said flexible electrically conductive sleeve.

27. A communications system according to Claim 20 wherein said first dipole element comprises a flexible electrical conductor.

28. A communications system according to Claim 20 further comprising:

a connector coupled to an end of said transmission line opposite said dipole feed; and

a length of coaxial coupled between said connector and said radio.

29. A method for making an antenna comprising:
coupling a first dipole element comprising a broadband matching network to and extend outwardly from a dipole feed in a first direction;

coupling a transmission line to extend from the dipole feed in a second direction opposite the first direction;

providing a flexible electrically conductive sleeve surrounding the transmission line and coupled to and extending outwardly from the dipole feed to serve as a second dipole element and as a balun; and

coupling a noise filter to the transmission line adjacent an end of the flexible electrically conductive sleeve opposite the dipole feed.

30. A method according to Claim 29 wherein the flexible electrically conductive sleeve is also shape-retaining.

31. A method according to Claim 29 wherein the first dipole element comprises a flexible electrical conductor.

32. A method according to Claim 29 further comprising coupling a connector to an end of the transmission line opposite the dipole feed.